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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,249	06/25/2003	Gregory A. Merkel	SP03-071	4924
22928	7590	05/02/2006	EXAMINER	
CORNING INCORPORATED			GREENE, JASON M	
SP-TI-3-1			ART UNIT	
CORNING, NY 14831			PAPER NUMBER	

1724

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/607,249	<b>Applicant(s)</b> MERKEL ET AL.	
	<b>Examiner</b> Jason M. Greene	<b>Art Unit</b> 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 74-84 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 74-80 is/are rejected.
- 7) ☒ Claim(s) 81-84 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/9/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The affidavit filed on 9 February 2006 under 37 CFR 1.130 has been considered but is ineffective to overcome the Merkel '198 reference. The Examiner notes that a declaration or affidavit establishing common ownership can only be relied upon to disqualify a commonly owned patent when the claims are rejected under 35 USC 103. Since claims 74-78 were rejected under 35 USC 102(e), the affidavit is ineffective to disqualify the Merkel '198 reference as prior art.

This Examiner further notes that the rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

### ***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 74-80 are rejected under 35 U.S.C. 102(e) as being anticipated by Merkel '198 (U.S. Patent 6,864,198 B2).

The applied reference has a common assignee and a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With regard to claims 74 and 75, Merkel '198 discloses a diesel particulate filter comprising a plugged wall-flow honeycomb ceramic body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein the filter exhibits a CTE (25-800 °C) of  $(8.1 \times 10^{-7})/^{\circ}\text{C}$ , a bulk filter density of 0.489 g/cm<sup>3</sup>, a median pore diameter  $d_{50}$  of 9.69 µm, a porosity of 62.51% and pore size distribution such that  $P_m(P_f) = 2.85$ , wherein  $d_{10}$  and  $d_{90}$  are pore diameters at 10% and 90% of the pore size distribution on a volumetric basis, and  $d_{10} < d_{50} < d_{90}$  in Example 2 of Table 3 in columns 11 and 12 and col. 1, line 65 to col. 3, line 55.

With regard to the bulk filter density, Merkel '198 teaches the honeycomb filter of Example 2 having a wall thickness of 0.0155 (0.0292 cm) and a cell number of 182 cells per inch<sup>2</sup> (28.2 cells per cm<sup>2</sup>) in Table 3. From the cell number, the number of cell walls per square cm can be calculated as  $2 * (28.2 \text{ cells per cm}^2)^{1/2} = 10.62$ . As was noted in the previous Office action, cordierite has a specific gravity of 2.52 g/cm<sup>3</sup>. From the

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specific gravity of cordierite and the porosity, the density can be calculated as  $10.62 \text{ cell walls/cm}^2 * 0.0292 \text{ cm} * 1 \text{ cm length} * 2.52 \text{ g/cm}^3 * 62.51\% \text{ porosity} = 0.489 \text{ g/cm}^3$ , which is less than  $0.60 \text{ g/cm}^3$ .

With regard to claims 76-78, Merkel '198 discloses a diesel particulate filter comprising a plugged wall-flow honeycomb ceramic body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein the filter exhibits a CTE ( $25\text{-}800^\circ\text{C}$ ) of  $(8.1 \times 10^{-7}/^\circ\text{C})$ , a bulk filter density of  $0.489 \text{ g/cm}^3$ , a median pore diameter  $d_{50}$  of  $9.69 \mu\text{m}$ , a porosity of 62.51% and pore size distribution such that  $P_m(P_f) = 2.85$ , wherein  $d_{10}$  and  $d_{90}$  are pore diameters at 10% and 90% of the pore size distribution on a volumetric basis, and  $d_{10} < d_{50} < d_{90}$  and wherein  $d_{90}$  is  $16.35 \mu\text{m}$  in Example 2 of Table 3 in columns 11 and 12 and col. 1, line 65 to col. 3, line 55.

With regard to claims 79 and 80, Merkel '198 discloses a diesel particulate filter comprising a plugged wall-flow honeycomb ceramic body composed of cordierite and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein the filter exhibits a CTE ( $25\text{-}800^\circ\text{C}$ ) of  $(5.5 \times 10^{-7}/^\circ\text{C})$ , a bulk filter density of  $0.453 \text{ g/cm}^3$ , a median pore diameter  $d_{50}$  of  $12.2 \mu\text{m}$ , a porosity of 58.4% and pore size distribution such that  $P_m(P_f) = 3.29$ , wherein  $d_{10}$  and  $d_{90}$  are pore diameters at 10% and 90% of the pore size distribution on a volumetric

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basis, and  $d_{10} < d_{50} < d_{90}$  in Example 7 of Table 3 in columns 11-14 and col. 1, line 65 to col. 3, line 55.

With regard to the bulk filter density, Merkel '198 teaches the honeycomb filter of Example 7 having a wall thickness of 0.0155 (0.0292 cm) and a cell number of 179 cells per inch<sup>2</sup> (27.75 cells per cm<sup>2</sup>) in Table 3. From the cell number, the number of cell walls per square cm can be calculated as  $2 * (27.75 \text{ cells per cm}^2)^{1/2} = 10.53$ . As was noted in the previous Office action, cordierite has a specific gravity of 2.52 g/cm<sup>3</sup>. From the specific gravity of cordierite and the porosity, the density can be calculated as  $10.53 \text{ cell walls/cm}^2 * 0.0292 \text{ cm} * 1 \text{ cm length} * 2.52 \text{ g/cm}^3 * 58.4 \% \text{ porosity} = 0.453 \text{ g/cm}^3$ , which is less than 0.60 g/cm<sup>3</sup>.

#### ***Allowable Subject Matter***

4. Claims 81-84 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

The prior art made of record does not teach or fairly suggest the filters of claim 76 having the additional characteristics recited in claims 81-84.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason M. Greene  
Primary Examiner  
Art Unit 1724

  
4/28/06

jmg  
April 28, 2006